

Notice of Allowability

Application No.

10/525,775

Examiner

Thomas F. Valone

Applicant(s)

ROZIERE, DIDIER

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the interview of 4/16/07.
2. ☒ The allowed claim(s) is/are 1-17 and 22-26.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 4/17/07.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20070319, 20070416.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with attorney Eric Jensen on April 16, 2007.

The application has been amended as follows:

a) Claim 1 has been amended in line 29 by deleting "to a receiving electrode" and inserting - - to one of said receiving electrodes - - .

b) Claim 1 has been amended in line 32 by deleting "at least another receiving electrode" and inserting - - at least one of other said receiving electrodes - - .

c) Claim 4 has been amended in line 2 by deleting "to claim 2," and inserting - - to claim 3, - - and also deleting "and" in line 3 and inserting - - has a same geometric shape as - - and deleting "exhibit the same geometric shape and are" in line 4 and inserting - - , the second transmitting electrode (TA) and the third transmitting electrode of inverse polarity (TB) - - .

d) Claim 5 has been amended in line 6 by deleting "of the receiving" and inserting - - of the transmitting - - .

e) Claim 16 has been amended in line 4 by deleting "to the third receiving" and inserting - - to the second receiving - - .

Art Unit: 2858

f) Claim 16 has been amended in line 7 by deleting "and second".

g) Claims 18, 19, 20 and 21 have been canceled.

h) Claim 22 has been amended in line 3 by deleting "used in a system according to claim 1,".

i) Claim 22 has been amended in line 20 by deleting "calculation(i) of" and inserting - - calculation (i) of - -.

j) Claim 23 has been amended in line 10 by deleting "transmitting electrode" and inserting - - third transmitting electrode - -.

2. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (i.e., Fig. 5 of "Segmented Mirror Control System Hardware for CELT"). See MPEP § 608.02(g). In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

3. The following is an examiner's statement of reasons for allowance:

A system for non-contact measurement of a relative displacement of a position between a first and second object with a sensor module having a transmitting plate and a receiving plate facing each other with transmitting and receiving electrodes, a means for applying high-frequency signals to the transmitting electrodes, a means for taking the measurement signals from the receiving electrodes, a means for processing the

Art Unit: 2858

measurement signals to supply signals representative of the relative displacement of the objects, where the electrodes constitute a capacitance that varies with displacement, and in that the processing means has a first charge amplifier with the input connected to one of the receiving electrodes and to the output of a modulator, connected as a multiplier via a reference capacitor, with a second charge amplifier whose input is connected to another receiving electrode and to the output of a second modulator, connected as a divider via a second reference capacitor, has not been found in the prior art.

A method for non-contact measurement of a relative displacement of a position between a first and second object with an application of high-frequency signals to transmitting electrodes on a transmitting plate on the first object, taking the modulated measurement signals from the receiving electrodes on a receiving plate fixed to the second object, with the transmitting and receiving electrodes facing each other and substantially aligned, processing the measurement signals to supply signals representative of the relative displacement of the objects, with the processing comprising an analog calculation of a first signal which is an inverse of a first capacitance and of a second signal which is the ratio of a second capacitance between transmitting and receiving electrodes, where the electrodes constitute capacitances that varies with displacement and misalignment respectively, and in that the processing has a feeding of a first charge amplifier with a signal from one of the receiving electrodes and a signal from a first modulator, connected as a multiplier via a reference capacitor, and a feeding of a second charge amplifier with a signal from another receiving

electrode and a signal from a second modulator, connected as a divider via a second reference capacitor, has not been found in the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas F. Valone whose telephone number is 571-272-8896. The examiner can normally be reached on 10-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 571-272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2858

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Thomas Valone, PhD, PE
Patent Examiner
Art Unit 2858
571-272-8896



ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800